VNS CCTV®

High Speed Dome Camera

User's Manual

● Please read the manual carefully before installing and using the unit.●

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Important Safeguards

1. During the course of transportation and storage, the product should be avoided from incorrect operations such as heavy pressing, strong vibration, soaking etc, which may cause damage to the unit.
2. The product is designed for Pendant or Wall Mount installation, so it can not be installed upside-down. And the module should be handled properly so as not to bring about mechanical problems affecting the integrative functions of it. The vitreous cover of the speed dome is complicated optical component, so do not touch it with bare hand(s). Otherwise, the cover might be scraped, and image quality affected.
3. Do not let any foreign objects or liquid infiltrate into the unit, which may damage the machine.
4. Please follow all electrical standards for safety when it is being connected and please adopt the particular power supply which is provided with the unit. The product's RS-485 and video signal adopt TVS-class lightning damage preventing technology, which can effectively prevent such pulse signal damage caused by lightning under 500W or electric surge. RS-485 and video signal should be kept enough distance from high voltage equipments and cables when they are in transmission, and necessary steps should be taken to prevent lightning damage or power surge.
5. No matter the unit is running or not, the camera module should never be aimed at the sun or object with extremely bright light. Otherwise, the camera module's CCD might be permanently damaged.
6. There are no parts inside the unit which can be repaired by the users themselves. When mechanical problems arise, do not be in a haste to do any repairing, please refer to the User's Manual to find the trouble. If causes can not be located, please refer servicing to qualified professionals. All servicing must be done by authorized personnel.

I. Introduction

Adopting latest technological achievements and cutting-edge manufacturing techniques, the High Speed Dome Camera is created with many years of accumulated experience. Equiped with a high performance DSP camera module with zooming lens, integrating built-in Pan/tilt and digital decoder, it represents the future trend of hi-tech monitoring products. The unit is capable of rapid positioning, consecutively tracing and scanning, which realizes real all-directional monitoring. The unit can automatically adapt to ambient brightness and object distance. Its digital control and elegantly simple design maximally reduces the connection between differnent parts in the system, which improves the reliability of the system and facilitate the installation and maintenance. Driven by a stepper electric motar, the unit runs smoothly, reacts quickly and locates positions accurately. At the same time, the unit has multiple intelligent functions such as: left & right scan, pattern scan, tour, alarm function etc.

Based on the above characters of common High Speed Dome Camera, this type of High Speed Dome Camera is further equiped with OSD menu operation interface with multi Input Modes, which further facilitates all kinds of operations.

With varieties of high-performances, this type of High Speed Dome Camera can be applied in every walk of life to monitor moving objects in large areas, such as monitoring smart buildings, bank, city streets, power departments, airports, bus/railway stations etc.

II. Technical Data

Power supply	DC15V(1.5A)
Working temperature	outdoor:(-25□～+65□)
Relative humidity	≤95%
Power consumption	20W
Communication system	RS485 bus
Baud rate of communication	1200 / 2400 / 4800 / 9600bps
Address Range	1~255
Manual Pan Speed	0.5º-200º/s(64 ranges)
Highest Cruising Speed	350º/s
Pan movement	360º endless
Tilt movement	0~90º
Automatic flip	Automatic 180º flip when vertical 90º
Speed Auto-control as per the changing of focal length	The speed dome can automatically adjust the running speed following the change of the focal length.
OSD menu	4 input modes, all the functions of the pan/tilt and the camera module can be oprated through the menu.
Preset position number	128
Left & right scan	Yes
Tour group	4 groups/16 preset positions for each group/dwelling time at each preset position can be configured in the range of 1-255s
Pattern Scan number	4
Idle Time function	The function to be carried out in idle time can be configured including invoking preset position, left & right scan, tour etc.
Alarm function	4 channels in/1channel out
Protection Grade	IP66
Weight	4.75Kg (Bracket included)

III. Characteristics

- The unit is equipped with a camera programme which can automatically identify 8 brands of camera modules: HITACHI, SONY, LG, CANON, SAMSUNG, KT&C, CNB and JCO.
- Adopting multi-functional high-performance DSP design with stable performance
- Integrated design with compact structure and high reliability
- Precise electric motor drive ensuring smooth running and agile reaction
- Internally-saved data will not lose within one year after power off.
- OSD menu function, facilitates the user to directly and conveniently configure the parameters and run the functions of the unit.
- 128 preset positions for freely storage and accurate locating
- 4 tour groups, 16 preset positions can be configure for each group.
- Support left&right scan function, the scanning speed can be configured at low, medium or high three levels.
- 4 pattern scans
- Support idle time function, multi-functions can be configured to be carried out in idle time
- Pan 360° consecutive movement, all-direction monit oring
- With the auto-flip function, tilt 180° consecutive monitoring realized
- Alarm: 4 channels in/1channel out
- Automatically adjusting moving speed according to the zoom ratio of the lens
- Auto Iris, Focus and White Balance

IV. Description of Functions

1. OSD Menu Operation

The functions of the pan/tilt and the built-in camera module can be conveniently configured and carried out through the OSD menu. These functions include: Preset Positions, Tours, Pattern Scan, Left & Right Scan, Alarm, Language Choosing, and the configuration of the parameters of the Camera Module etc.

2. Trace the Target

The users can control the movement of the unit by operating the joystick of the keyboard so that they can trace the moving object or change the monitoring area. The angle of view or the size of the image of the object can be changed through adjusting the focal length. In the default Auto-focus, Auto-Iris state, following the movement of the unit, the lens will quickly adjust itself to get clear image according to the change of the object.

3. Automatic Adjustment of Focal Length/Movement Speed

When the focus is long and in the mode of manual adjustment, due to the high sensitivity of the speed dome, even the slightest movement of the joystick would make the image move quickly, which causes image losses. Based on human design, the speed dome can automatically adjust the horizontal and vertical moving speed of the pan/tilt according to the current focal-length, which makes the manual target-tracing operation much easier.

4. Automatic Flip

In the process of operating the joystick to trace and monitor, if the user move the lens to the bottom(vertical) then continues pressing the joystick,

the lens will automatically flip 180º horizontally, then the user can still control it to move upwards till 90°, which enables the user to directly observe the situation on the back side, thus tilt 180° consecutive monitoring can be realized.

5. Configure and Invoke Preset Positions

The preset position function works in this way: the speed dome stores the data of the pan/tilt angles and lens focal-length in current state; when needed, invoke these data, then promptly move the pan/tilt and camera module to the corresponding position. Through the OSD menu, the user can quickly and conveniently configure, invoke, delete the preset positions and compile the title of the preset positions. When the user invokes the preset position through the OSD menu, the unit will move to the preset position promptly, at the same time, the title of the preset positon compiled by the user will be shown. The unit supports 128 preset positions.

6. Automatic Tours

The automatic tour function is a built-in function of the speed dome camera. Through beforehand programming, the user can arrange the preset positions into the automatic tour in the desired order. When it's needed to run the tour, operating through the OSD menu, the user can make the speed dome camera automatically move as per the order of the preset positions configured in the tour with preset time intervals.

- The staying time at each preset position can be configured.
- Altogether 4 tours can be configured with the unit.
- Sixteen preset positions can be stored in one tour.

7. Left & right Scan

Left/right limiting positions can be conveniently configured through OSD

menu. After configuring well, the user can run the left/right scan directly through the OSD menu, then the speed dome will automatically run horizontally between the left limiting position and the right limiting position, at the preset speed.

8. Pattern Scan

The unit can store the user's operating track and invoke it when necessary. A 4-minutes operation is acceptable to be stored for one Pattern Scan track. Altogether 4 Pattern Scan tracks can be stored in this unit.

9. Alarm Function

The user can set the key areas as alarm points. Through the linkage with the external-connected detector, once there is alarm signal transmitted to the unit, the unit will promptly adjust the camera module to shoot the alarm point, at the same time, it will output alarm signal through the alarm output port. Considering that the channels that can be contained with wire alarm is so less, users can also choose our latest-developed wireless alarm, wireless alarm can support 16 channels in, 16 chanels out.

10. Idle Time Function

Users can configure the function that is to be carried out in idle time as the Idle Time Function. If the user exit the OSD menu after finishing with other operations, and if the speed dome is in still state without running, then after a period of time during which nobody operates the unit, the unit will automatically begin to carry out Idle Time Function that is configured in advance. The functions that can be configured as Idle Time Function include invoking preset position, running left&right scan, running tour etc. The length of the period of time after which the Idle Time Function is to

be carried out can be configured, the range is 1~240minutes.

11. Camera module Lens Control

Users can adjust the Focal-length through controlling the keyboard to get panoramic view or close view that they desire.

Focal Length Control

Users can adjust the Focal-length through controlling the keyboard to get panoramic view or close view that they desire.

Focus Control

The system takes automatic focus as the default. While moving, the camera module can automatically focus on the center of the object view to get clear image. Under special circumstances, the user can manually adjust the focus to achieve desired image effect.

● Manual focus can be realized through controlling the keyboard or matrix. For details, please refer to the operation manual of the controlling keyboard or matrix.

● In the state of manual focus, the user can control focal–length to make the lens focus on objects. If the speed dome camera is configured to resume auto-focus upon joystick operation, when there is operating on the joystick, the speed dome camera will automatically focus. If a period of time is configured for auto-focus resuming, once there is no controlling order received, after the period of time, the speed dome camera will resume auto-focus.

Under the following circumstances, the camera module can not carry out auto-focus:

● When the object is not in the center of the view.

● When simultaneously observe a far object and a near one, clarity for both of the images can not be guaranteed at the same time.

● When observing objects with extreme brightness, such as neon lights,

spotlight, etc

● When the object is behind the glass with water drops or dust

● When the object moves very fast

● When the object is large-sized and drab, such as wall

● When the object is too dark or fuzzy

Iris Control

● The system takes automatic-iris as the default. The iris can automatically sense the change of the environmental light and make quick adjustment, so that the brightness of the image is stable.

● The user can manually adjust the iris through controlling the keyboard to obtain desired brightness for the image.

Automatic Back Light Compensation (BLC)

Automatic Back Light Compensation can be realized via district dividing. In extremely bright background, the camera module can compensate the brightness of the relatively dark objects, while adjust the light of the bright background, avoiding that the whole image is too bright to watch due to the too high brightness of the background while the object is too dark to be distinguished, so that clear image can be got.

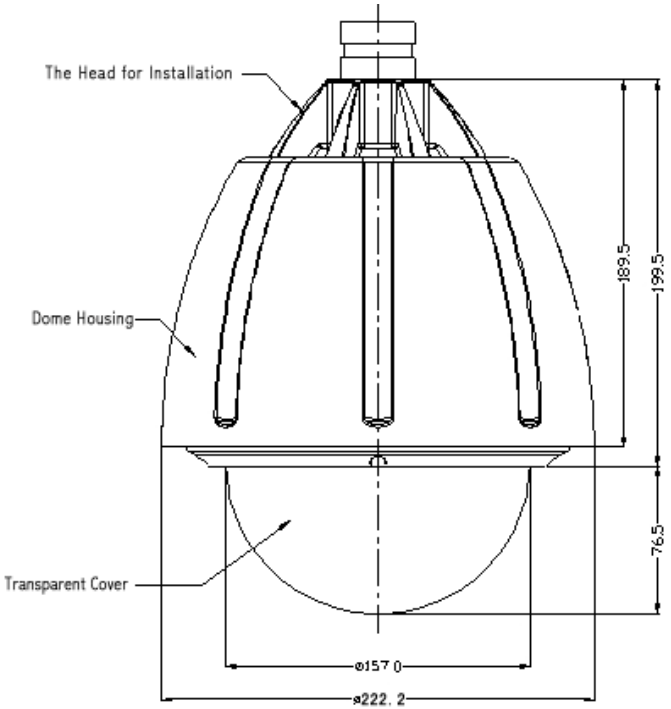
Automatic White Balance

According to the ambient brightness, the camera module can automatically adjust the White Balance to re-display the real colors.

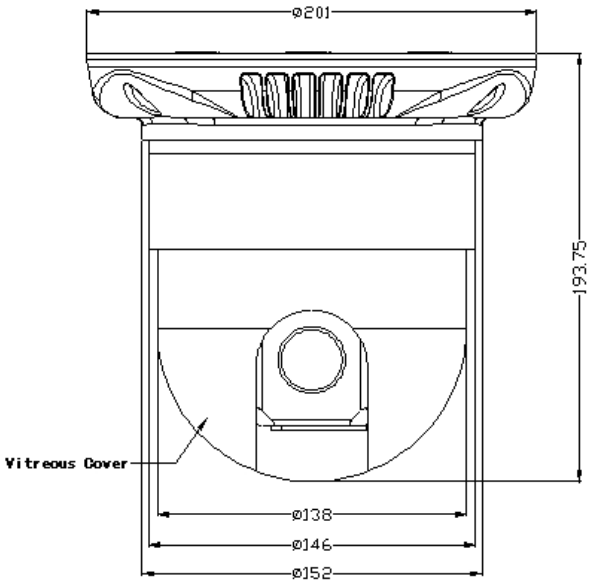
V. Installation and Connection of the System

There are three types of installation for high speed dome cameras, the dimensions are shown below:

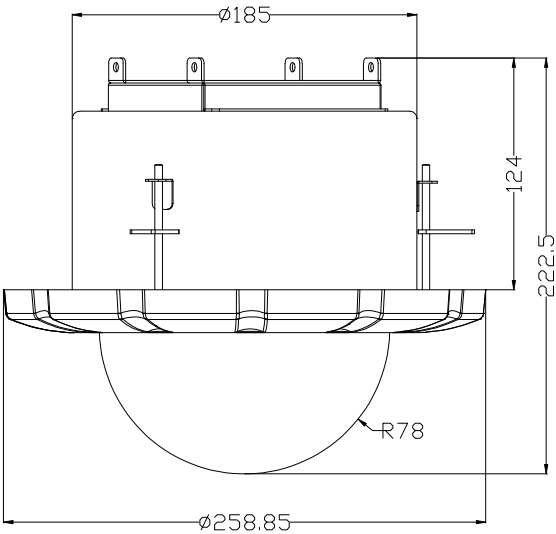
5.1 The outer-shape and dimension of Wall-mount, Pendant-mount High-speed Dome Camera



5.2 The outer-shape and dimension of Ceiling-mount High-speed Dome Camera



5.3 The outer-shape and dimension of In-ceiling-mount High-speed Dome Camera



·Installation Style and Ancillary Components

Products	Installation Style	Bracket	Cable (with connector)
High Speed Dome Camera	Wall-mount	Wall bracket	Power Cable 1pc Video cable 1pc 485 cable 1pc Lightening-proof cable 1pc 5-strands cable 1pc (Alarm input) 2-strands cable 1pc (Alarm output)
	Pendant-mount	Bracket with the length of 20cm or 40cm	
	Ceiling-mount	No bracket	
	In-ceiling mount	No bracket	

Remarks:

1. The connection must be carried out by qualified personnel conforming to local regulations.
2. For connection details, please refer to the silk-screen printing indications and installation instructions on the PCB board.
3. The vitreous cover of the unit is complicated optical component, so do not touch it with bare hand(s). Otherwise, the cover might be scraped, and image quality affected.
4. To ensure the clarity of images, please clean the vitreous cover regularly. Be careful when cleaning it. You can only hold the outer ring of the vitreous cover. Do not touch it with bare hand(s), for acid sweat left may erode the surface plating of the vitreous cover, or hard things may scrape the vitreous cover leading to fuzzy image and, hence, affecting image quality. Please use adequately soft dry cloth or other substitutes to clean the inner and outer surfaces. If the vitreous cover is extremely dirty, it may be cleaned with mild detergent.

5.4 Preparation for the Installation:

· To avoid mistakes, installation must be carried out by qualified

personnel conforming to related regulations.

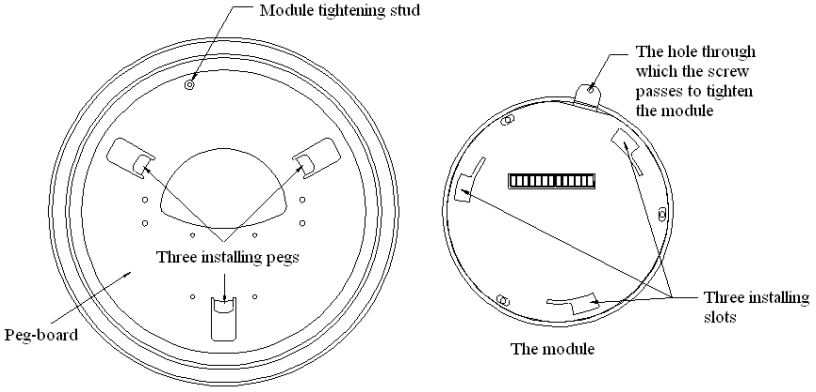
· Please check whether the attachments are all ready, and whether the installing location and style of installation are compatible.

· The wall-mount and the pendant-mount high speed dome camera is composed of bracket, housings, power supply, decoding board, pan/tilt, temperature controlling devices, etc. Well, the ceiling-mount high speed dome camera is composed of ceiling installing board, ceiling-mount decorating cover, housings, power supply, decoding board, pan/tilt etc.

· When the speed dome camera leaves factory, it has undergone installation testing, so the user can directly carry out the installation.

· For wall-mount and pendant-mount high speed dome, before installation, the user should open the vitreous cover and make sure the screws are tight and cable connectors not loose.

The sketch for the Installation of the Module into the Housing of the wall-mount or pendant-mount high speed dome:



Locate the three installing slots at the bottom of the module into the three pegs on the housing peg-board (be sure in right direction), and lock them in place then swivel the module right for 20°, to the point where the screw-fixing hole in the module meets the corresponding stud. Finally, fix

the module with the housing with M3 screw and make sure it is tight.

Attention: The adaptor equiped can only be placed indoor or in water-proof box or other water-proof spaces, it can not be placed directly outdoor, otherwise water may seep in and damage the adaptor.

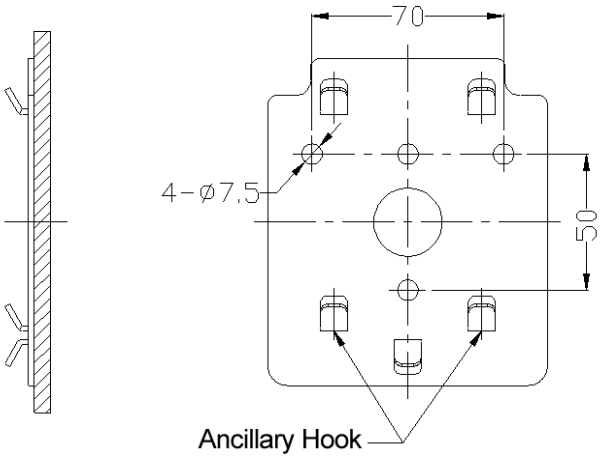
5.5 Installation of Wall-mount High-speed Dome Camera

5.5.1 Installation of Wall-mount Bracket

Attention:

The wall for the selected installation location must be firm without peeling. To avoid quivering images resulting from unstable installation, make sure the place for installation can sustain five times the total weight of the speed dome camera and the bracket.

A. Use the bottom installation board of the bracket as template and draw the positions of the installing holes on the desired wall locus;



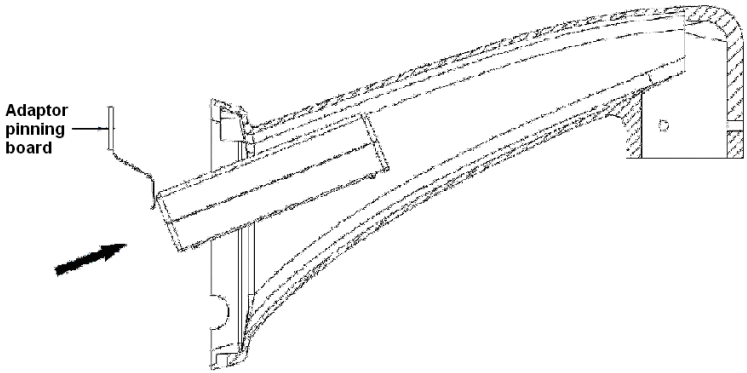
Wall Bracket Installation Dimensions

B. Use an electrical drill to make four holes for M6 screws on the above-drawn positions, and drive in the expansion M6 screws;

C. Push the power cable, communication cable and video cable through the bracket tube, leaving long enough cables for connection;

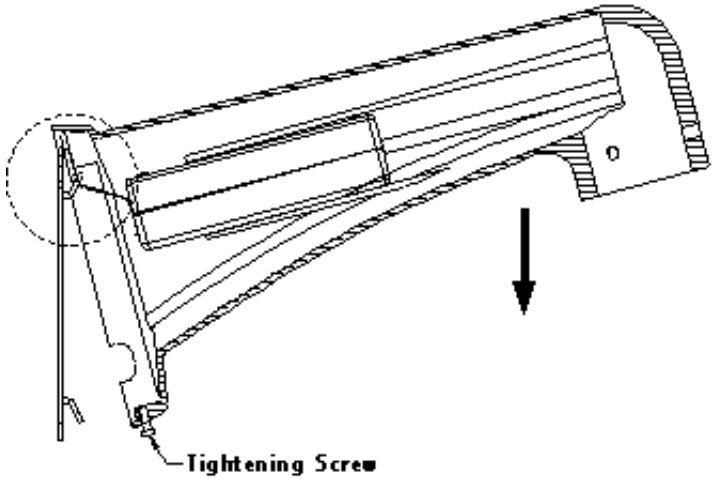
D. Fix the installation board of the bracket firmly on the wall with four M6 screw nuts and washers.

E. Put the power adaptor into the wall bracket and pin the power adaptor with the power pinning board, lest the power adaptor slides out. (See the figure below)



F. Fix the high speed dome with the wall bracket. (refer to the detailed explanation in the next page)

G. Put up the wall bracket assembled with high speed dome on the ancillary hooks. Pull the power cable, video cable and controlling cable out through the wire out-going hole, and direct the dotted-line part shown in the figure to the two corresponding pegs on the installed peg-board, then push the bracket downwards until it locks in place. Make sure the wall bracket is well fixed with the installation board, then direct the screw on the bracket to the corresponding hole on the lower part of the installation board and tighten the screw. (See the figure below)

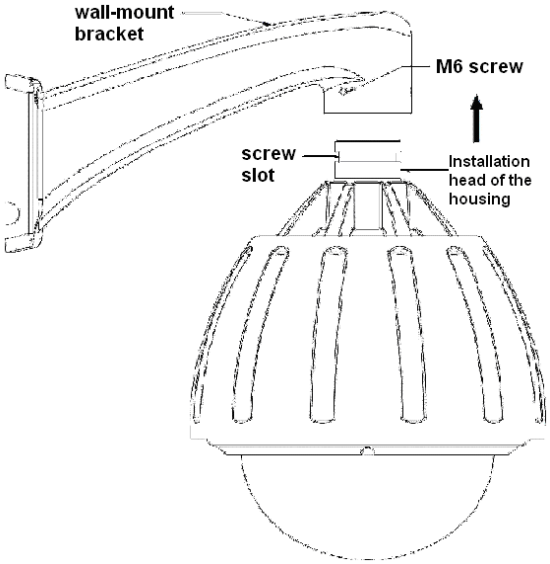


5.5.2 Installation of High Speed Dome Camera

a. Unpack the carton and carefully take out the speed dome camera and its attachments, open the vitreous cover and take out the fillings.

b. Check cable connectors and see if any of them loose and configure the coding switch.

c. Put the connecting cables into the bracket tube, then push the installing port on the top of the outer housing into the installing hole of the bracket, tighten the 3 M6 screws and fix well. Make sure the M6 screws just fit in the screw slot of the installing port of the housing. (See the picture below).



5.5.3 Connection of Exterior Cables

Connect BNC video outlet of the unit with the already disposed video cable, the power cable with the already disposed power cable and RS485 controlling cable with already disposed RS485 controlling cable. The cables of high speed dome camera is shown below:

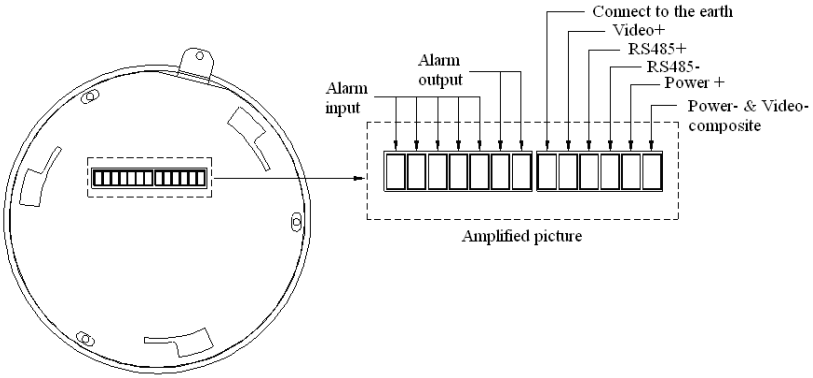
Cable	Application	Connecting Objects	Remarks
7-strand cable	power supply	high speed dome--- power supply adaptor	Power supply connecting outlet
	RS485 cable	high speed dome--- controlling device	Green (A), white(B)
	Video cable	Camera module--- monitoring device	BNC connector
	Lightening proof	High speed dome --- the earth	Grey

5-strand cable	Alarm input	Detector ---- high speed dome	Black (Alarm input public terminal) Yellow (the 1st channel alarm input) Green (the 2nd channel alarm input) Blue (the 3rd channel alarm input) White (the 4th channel alarm input)
2-strand cable	Alarm output	High speed dome--- alarm horn	Brown (alarm output public terminal) Grey (alarm output terminal)

 Make sure the polarity of RS485 controlling cable connection is correct, A: RS485 positive, B: RS485 negative.

 If wrongly connected, the speed dome camera will be out of control.

The detailed connection as the sketch below:



5.5.4 Switch on Power

a. Make sure the polarity of plugs, sockets and cables connection is correct, then switch on power

b. The speed dome camera begins to do the self-check by moving pan 360°, tilt 90° to check the camera lens, the electr ical and mechanical structures in pan/tilt state, then executing the restoration program and resuming its original position. After the unit stops moving, it finishes

self-check and is ready to receive controlling instructions

c. Use controlling device to control the unit, checking whether it can perform the functions of the pan/tilt and camera lens. If not, please check the configuration of communication protocol, Baud rate and address, and the connection of 485 controlling cable.

5.5.5 Vitreous Cover Installation

a. Clean the dust and stain on the vitreous cover with soft cloth, attention not to scrape the vitreous cover;

b. Aim the four special bolts (the bolts don't fall even if they are loosened to the extreme) in the vitreous cover at the bolts holes in the outer housing, then tighten the bolts.

5.6 Installation of Pendant-mount High Speed Dome

5.6.1 Installation of Pendant-mount Bracket

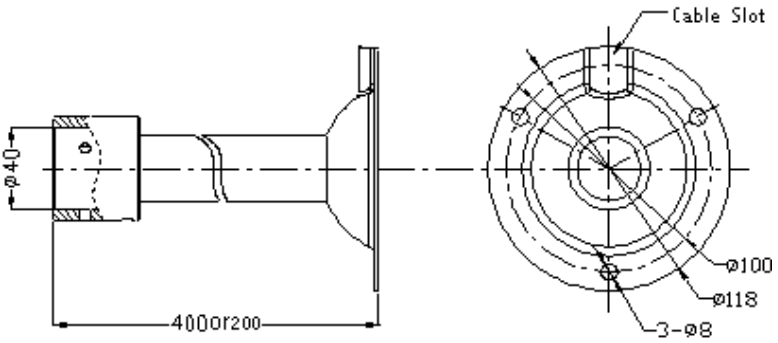
Attention:The ceiling for the selected installation location must be firm without peeling. To avoid quivering images resulting from unstable installation, make sure the place for installation can sustain five times the total weight of the speed dome camera and the bracket.

a. Use the bracket as template and draw the positions of the installing holes on the desired ceiling locus;

b. Use an electric drill to make three holes for M6 screws on the above-drawn positions, and drive in the special M6 screws;

c. Push the power cable, communication cable and video cable through the bracket tube, leaving long enough cables for connection;

d. Fix the bracket firmly on the ceiling with three M6 screw nuts and washers.



5.6.2 Installation of High Speed Dome Camera

a. Unpack the carton and carefully take out the speed dome camera and its attachments, open the vitreous cover and take out the fillings.

b. Check cable connectors and see if any of them loose and configure the coding switch.

c. Put the connecting cables into the bracket tube, then push the installing port on the top of the outer housing into the installing hole of the bracket, tighten the 3 M6 screws and fix well. Make sure the M6 screws just fit in the screw slot of the installing port of the housing.

5.6.3 Connection of Exterior Cables

Connect BNC video outlet of the unit with the already disposed video cable, the power cable with the already disposed power cable and RS485 controlling cable with already disposed RS485 controlling cable. The cables of high speed dome camera is shown below:

Cable	Application	Connecting Objects	Remarks
7-strand cable	power supply	high speed dome--- power supply adaptor	Power supply connecting outlet
	RS485 cable	high speed dome--- controlling device	Green (A), white(B)

	Video cable	Camera module--- monitoring device	BNC connector
	Lightening proof	High speed dome --- the earth	Grey
5-strand cable	Alarm input	Detector ---- high speed dome	Black (Alarm input public terminal) Yellow (the 1st channel alarm input) Green (the 2nd channel alarm input) Blue (the 3rd channel alarm input) White (the 4th channel alarm input)
2-strand cable	Alarm output	High speed dome--- alarm horn	Brown (alarm output public terminal) Grey (alarm output terminal)

- Make sure the polarity of RS485 controlling cable connection is correct, A: RS485 positive, B: RS485 negative.
- If wrongly connected, the speed dome camera will be out of control.

5.6.4 Switch on Power

a. Make sure the polarity of plugs, sockets and cables connection is correct, then switch on power

b. The speed dome camera begins to do self-check by moving pan 360°, tilt 90°to check the camera lens, the electrical a nd mechanical structures in pan/tilt state, then executing the restoration program and resuming its original position. After the speed dome camera stops moving, it finishes self-check and is ready to receive controlling instructions

c. Use controlling device to control the speed dome camera, checking whether it can perform the functions of the pan/tilt and camera lens. If not, please check the configuration of communication protocol, Baud rate and address, and the connection of 485 controlling cable.

5.6.5 Installation of the Vitreous Cover

a. Clean the dust and stain on the vitreous cover with soft cloth, attention

not to scrape the vitreous cover;

b. Aim the four special bolts (the bolts don't fall even if they are loosened to the extreme) in the vitreous cover at the bolts holes in the outer housing, then tighten the bolts.

5.7 Installation of ceiling-mount high speed dome camera

5.7.1 Installation of ceiling-mount installation board

Attention:The ceiling for the selected installation location must be firm without peeling. To avoid quivering images resulting from unstable installation, make sure the place for installation can sustain five times the weight of the speed dome camera.

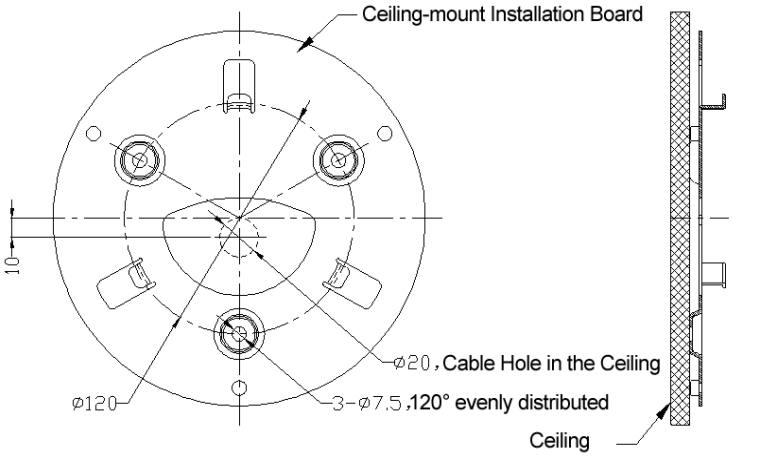
a. Use the ceiling-mount installation board as template and draw the positions of the three installing holes and the cable hole on the desired ceiling locus;

b. Use an electric drill to make three Expansion screw holes for M6 screws on the above-drawn positions, and drive in the Expansion M6 screws;

c. Use an electric drill to make a cable hole with the diameter of 20mm on the ceiling.

d. Push the power cable, communication cable and video cable through the cable hole, leaving long enough cables for connection;

e. Fix the ceiling-mount installation board firmly on the ceiling with three M6 screw nuts and washers.



5.7.2 Installation of High Speed Dome Camera

a. Unpack the carton and carefully take out the speed dome camera and its attachments, open the vitreous cover and take out the fillings.

b. Check cable connectors and see if any of them loose and configure the coding switch.

c. Install the module of the high speed dome.

Locate the three installing slots at the bottom of the module into the three pegs on the installation board (be sure in right direction), and lock them in place then swivel the module right for 20°, to the point where the screw-fixing hole in the module meets the corresponding stud. Finally, fix the module with the installation board with M3 screw and make sure it is tight.

d. Install the decorating cover with the installation board, tighten the screw.

5.7.3 Connection of Exterior Cables

Connect BNC video outlet of the unit with the already disposed video cable, the power cable with the already disposed power cable and

RS485 controlling cable with already disposed RS485 controlling cable. The cables of high speed dome camera is shown below:

Cable	Application	Connecting Objects	Remarks
7-strand cable	power supply	high speed dome--- power supply adaptor	Power supply connecting outlet
	RS485 cable	high speed dome--- controlling device	Green (A), white(B)
	Video cable	Camera module--- monitoring device	BNC connector
	Lightening proof	High speed dome --- the earth	Grey
5-strand cable	Alarm input	Detector ---- high speed dome	Black (Alarm input public terminal) Yellow (the 1st channel alarm input) Green (the 2nd channel alarm input) Blue (the 3rd channel alarm input) White (the 4th channel alarm input)
2-strand cable	Alarm output	High speed dome--- alarm horn	Brown (alarm output public terminal) Grey (alarm output terminal)

- Make sure the polarity of RS485 controlling cable connection is correct, A: RS485 positive, B: RS485 negative.
- If wrongly connected, the speed dome camera will be out of control.

5.7.4 Switch on Power

a. Make sure the polarity of plugs, sockets and cables connection is correct, then switch on power

b. The speed dome camera begins to do self-check by moving pan 360°, tilt 90°to check the camera lens, the electrical a nd mechanical structures in pan/tilt state, then executing the restoration program and resuming its original position. After the speed dome camera stops moving, it finishes

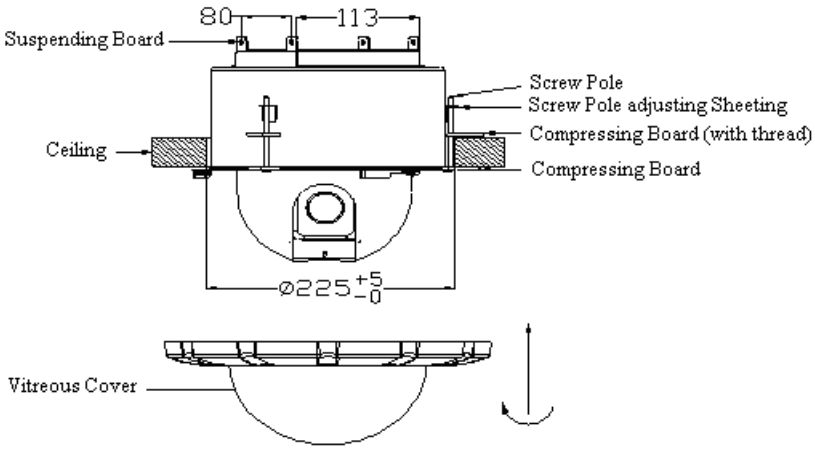
self-check and is ready to receive controlling instructions

c. Use controlling device to control the speed dome camera, checking whether it can perform the functions of the pan/tilt and camera lens. If not, please check the configuration of communication protocol, Baud rate and address, and the connection of 485 controlling cable.

5.8 Installation of In-ceiling-mount high speed dome camera

5.8.1 Fix the High-speed Dome Camera and Install the housing

Locations with suspended top suit the High-speed dome camera with in-ceiling-mount installation style, which appears to be a hemisphere, having elegant-look and good concealment. The in-ceiling-mount style installation applies to solid locations of the ceiling. The ceiling for the selected installation location must be firm without peeling. To avoid quivering images resulting from unstable installation, make sure the place for installation can sustain five times the weight of the speed dome camera.



a. Make a hole with the measurement of Φ225-Φ230 at the selected position on the Ceiling (as the above picture).

b. When installing, firstly pull out the 3 Screw Pole Adjusting Sheetings, then turn the 3 Compressing Boards clockwise for 90°.

c. Push the In-ceiling-mount High-speed Dome Camera into the hole in the ceiling, turn the 3 Compressing Boards back to the initial positions and make the 3 Compressing Boards press firmly on the ceiling (as the above picture). Then insert the three Screw Pole Adjusting Sheetings which were pulled out just now.(remark: the Screw Pole Adjusting Sheeting sticks with the Compressing Board.)

d. Bind iron wires (diameter less than Φ5) with suitable length to the four corresponding holes on the Suspending Board (the relative positions of the four holes are as shown in the above picture), then hang the High-speed Dome Camera. Please ensure the stability of the installation so that there will be no trembling image caused by unstability of the installation.

e. Carefully take out the Vitreous Cover, wipe off the dust and dirt from the Vitreous Cover with a soft cloth. Please be cautious not to make the Vitreous Cover dirty or scrape it.

f. Wear gloves, fit the 3 plastic buttons on the Vitreous Cover respectively to the 3 corresponding buttons on the housing, press firmly together, then turn right for about 2 degrees till it cann't go forward any more. (As shown in above picture.)

5.8.2 Connection of Exterior Cables

Connect BNC video outlet of the unit with the already disposed video cable, the power cable with the already disposed power cable and RS485 controlling cable with already disposed RS485 controlling cable. The cables of high speed dome camera is shown below:

Cable	Application	Connecting Objects	Remarks
7-strand cable	power supply	high speed dome--- power supply adaptor	Power supply connecting outlet
	RS485 cable	high speed dome--- controlling device	Green (A), white(B)
	Video cable	Camera module--- monitoring device	BNC connector
	Lightening proof	High speed dome --- the earth	Grey
5-strand cable	Alarm input	Detector ---- high speed dome	Black (Alarm input public terminal) Yellow (the 1st channel alarm input) Green (the 2nd channel alarm input) Blue (the 3rd channel alarm input) White (the 4th channel alarm input)
2-strand cable	Alarm output	High speed dome--- alarm horn	Brown (alarm output public terminal) Grey (alarm output terminal)

- Make sure the polarity of RS485 controlling cable connection is correct, A: RS485 positive, B: RS485 negative.
- If wrongly connected, the speed dome camera will be out of control.

5.8.3 Switch on Power

a. Make sure the polarity of plugs, sockets and cables connection is correct, then switch on power

b. The speed dome camera begins to do self-check by moving pan 360°, tilt 90°to check the camera lens, the electrical a nd mechanical structures in pan/tilt state, then executing the restoration program and resuming its original position. After the speed dome camera stops moving, it finishes self-check and is ready to receive controlling instructions

c. Use controlling device to control the speed dome camera, checking whether it can perform the functions of the pan/tilt and camera lens. If not,

please check the configuration of communication protocol, Baud rate and address, and the connection of 485 controlling cable.

5.9 Connection and installation of alarm

Connect the alarm cables according to the sketch below. Once distinguishing the alarm signal, the speed dome will immediately act as per the process configured before, it will start the camera, display the image of the alarm zone on the monitor, adjust the speed dome at the alarm point, and monitor the preset position, record what happens at the alarm zone as soon as possible. Connection of the alarm cables as the sketch below:

Attention:

a. Alarm input must be ON/OFF input signal, any other types of input signal(such as power voltage etc) is possible to damage the unit. When there are alarm signals from multiple channels, the unit will respond to them one by one, the interval is 3 seconds.

b. Once there is alarm signal coming in, the unit will not respond to “Scan”, “Tour” etc functions. Manual operation is needed to restore “Scan” , “Tour” etc functions.

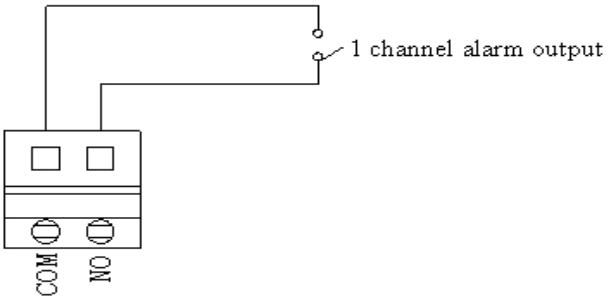
c. No matter the alarm function is opened or closed, alarm output always responds. For example, if the alarm function of the unit is not open, when the unit distinguishes alarm signal, the unit will not be adjusted to corresponding preset position, but the alarm output still responds.

d. The operation method for alarm fuction is: through invoking the No. 147(117) “preset position” to open alarm function, throuh invoking No. 148(118) “preset position” to close alarm function.

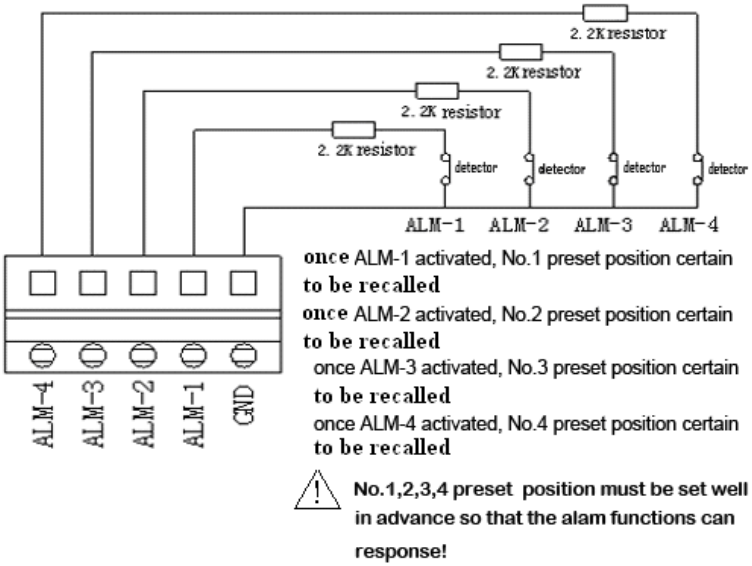
e. For the input terminals which are not connected with detectors, 2.2KΩ risistor must be connected, otherwise the speed dome will thinks

that there is alarm signal coming in, thus the alarm output is always on.

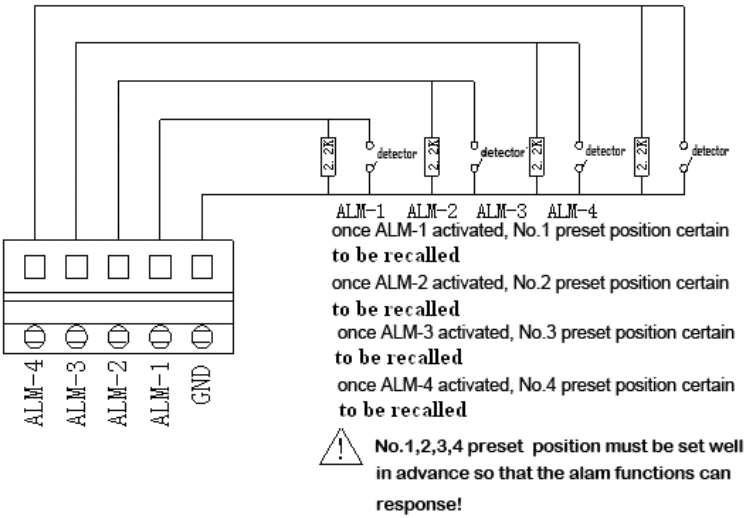
Alarm output connection sketch



Connection sketch for Alarm input with Normally-Closed (NC) detector



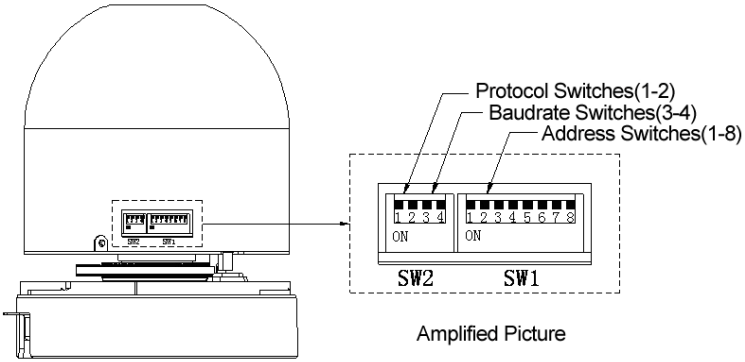
Connection sketch for Alarm input with Normally-Open (NO) detector


2.2K
detector
ALM-1
ALM-2
ALM-3
ALM-4
GND
once ALM-1 activated, No.1 preset position certain to be recalled
once ALM-2 activated, No.2 preset position certain to be recalled
once ALM-3 activated, No.3 preset position certain to be recalled
once ALM-4 activated, No.4 preset position certain to be recalled
No.1,2,3,4 preset position must be set well in advance so that the alam functions can response!

VI. Configure the system of the High Speed Dome Camera

6.1 Configure Communication Protocol, Address and Baud Rate of High Speed Dome Camera

Before the installation of the speed dome camera, you must confirm the protocol and Baud rate of the controlling system as well as the address code of the high speed dome camera, then, configure the switches in the speed dome so that they are identical with that of the controlling system. The corresponding switches configuration is shown in the following figure:



6.1.1 Configure Communication Protocol of the High Speed Dome Camera

The DIP-1 and DIP-2 of SW2 on the PCB board are for communication protocol configuration. Please refer to the following table:

NO.	2 1	PROTOCOL
1	0 0	PELCO_D
2	0 1	PELCO_P
3	1 0	JCO
4	1 1	PELCO_D1

If the controlling device could only support the preset position numbers below 128, please use PELCO_D1 controlling protocol.

6.1.2 Configure the Address of the Speed dome camera

Before actual using, the address of the speed dome camera should be configured. The switches(1-8) of SW1 on the PCB board are used to configure address of the speed dome camera from 1 to 255. The coding switches from DIP-1 to DIP-8 are equivalent to a 8-bit binary figure. The state “ON” of each bit means “1” while”OFF”means”0”. Corresponding state of coding switches and address is shown in the appendix table.

6.1.3 Configure Baud Rate of Communication

DIP-3 and DIP-4 of SW2 on the PCB board are used to configure Baudrate of communication, the default configuration is 4800BPS. Following table shows states of coding switches and corresponding Baudrate.

No.	4 3	Baudrate
1	0 0	1200 BPS
2	0 1	2400 BPS
3	1 0	4800 BPS
4	1 1	9600 BPS

Remark: If the speed dome camera is used at the farthest terminal, there should be a parallel connection of a 120Ω terminal matching resistor between A, B lines of RS485.

6.2 Table for the functions that can be configured or operated directly through the keyboard

Notice: For this high-speed dome camera with OSD menu, the functions of the pan/tilt and the built-in camera module can be realized through the OSD menu (for detailed operation, please refer to the descriptions in Chapter VII), well, besides this, actually, a considerable part of the functions can also be realized directly through simple operations on the keyboard. Detailed descriptions as below:

“PELCO-D” protocol has no corresponding orders for part of the special functions, so we converted functions of some of the commonly-used orders, generally converting in the way of “invoke preset position/ configure preset position”. Order converting correspondence is shown in the following table:

Invoke "preset position" No.	Keyboard operation meaning	Invoke "preset position" No.	Keyboard operation meaning
130	Configure left limiting position	138	Stop Pan/tilt auto-scanning
131	Configure right limiting position	140	Start tour configuring
132	Start left&right scanning (low speed)	141	Exit tour configuring
133	Start left&right scanning (medium speed)	142	Start running a tour
134	Start left&right scanning (high speed)	147	Open Alarm Function
135	Start Pan/tilt 360º scanning (low speed)	148	Close Alarm Function
136	Start Pan/tilt 360º scanning (medium speed)	162	Activate default position function
137	Start Pan/tilt 360º scanning (high speed)	163	Close default position function
150	High speed dome camera position restoration	164	Configure default position function
145	Enter menu of the camera module	165	Open the fog dispersing function
146	Exit menu of the camera module	166	Close the fog dispersing function

Intelligent control and some of its functions can be realized through the keyboard's control over speed dome camera. Because different

controlling system interfaces may differ in operation, operation details are subject to the related manufacturer's manuals. Under certain circumstances of special requirements and operations, please refer to dealers for necessary information.

VII. Configuration and Operation through the OSD MENU

7.1 Basic Operation:

7.1.1 Power on and self-checking of the Speed Dome:

Once power on, the unit enters self-checking procedure. The unit pans slowly to the default horizontal 180° position, the n tilt to 42°. The lens zoom from far to near, then from near to far. During the self-checking process, the corresponding information of the system will be displayed on the screen, as shown below:

VERSION NO.:	V2.31
PROTOCOL:	PELCO_D
ADDRESS:	001
BAUDRATE:	4800.N.8.1

When the self-checking is finished, the title of the speed dome " " and the title of the location "180 42" will be displayed. This indicates operations over the system can be carried out now. The detailed operation method will be introduced in the later chapters.

7.1.2 Enter and exit the Main Menu

1) The Main Menu will be displayed when press “95 PREVIEW” (invoke Preset Position 95) or invoke Preset Position No. 1 for twice within 5 seconds. All the configuration with the menu has to be through Main Menu.

2) The Main Menu will be exited when press “IRIS-”.

7.1.3 Basic operation on the Keyboard and corresponding functions.

[IRIS+](OPEN)	It means “Enlarge Iris” when viewing image, it means “Save/Return” when configuring menu
[IRIS-](CLOSE)	It means “Narrow Iris” when viewing image, it means “Exit the whole configuring process without saving the configuration” when configuring menu
[FOCUS+](FAR)	Focus to far. It means “Enter lower grade menu or enter the configuration” when configuring menu.
[FOCUS-](TEL)	Focus to near. It means “Delete or decrease” when configuring menu.
[ZOOM+](TELE)	Focal length shorter.
[ZOOM-](WIDE)	Focus length longer
Joystick Up:	to Choose the upper one in Menu Configuration option, to make the camera turn upwards in Image Option.
Joystick Down:	to Choose the lower one in Menu Configuration option, to make the camera turn downwards in Image Option.
Joystick Left:	to Choose the left one in Menu Configuration option, to make the camera turn left in Image Option.
Joystick Right:	to Choose the right one in Menu Configuration option, to make the camera turn right in Image Option.
Attention	1) If the keyboard used for operation is not from this company, please choose the keys in the brackets for operation. When carrying out number configuration, you need only press on FOCUS+, FOCUS- without release, the number will increase or decrease continuously.

7.2 Table for all Configuration and Operations through OSD Menu:

MAIN MENU	1.SYSTEM INFO	1. EDIT SPEEDDOME TITLE		The titles can be editted with 4 input modes
		2. TITLE DISPLAY SETUP	1. SPEEDDOME TITLE	To choose which items of informations are to be shown on the screen
			2. PRESET TITLE	
			3. DIRECTION TITLE	
		3. PAN/TILT SETUP	1. AUTOFLIP	on/off
			2. PROPORTION P/T	on/off
			3.IDLE TIME	can configure as 0~240minutes
			4. IDLEACTIVATE	Invoking Preset Postion, Left & Right Scan, Running Tour etc optional
		4. CLEAR THE SETUP	1. CLEAR ALL PRE-POSITION	
			2. CLEAR ALL TOUR	
		5. LANGUAGE	ENGLISH AND CHINESE TWO INTERFACES ALTERNATIVE	
	2. CAMERA SETUP	1. DIGITAL ZOOM		on/off
		2. BLC MODE		on/off
		3. B&W/COLOR MODE		auto/color/B&W
		4. ADVANCED FUNC SETUP	1. EXP MODE	
			2. EXP LEVEL	

			3. EXPCOMP	
			4. SLOW SHUTTER	
			5. WB MODE	
			6. R GAIN	
			7. B GAIN	
			8. CAMERA RESET	
	3. AUTO-RUN	1. PRESET POSITION	1. SERIAL NO.	Maximum 128 Preset Positions
			2. SETUP	
			3. PREVIEW	
			4. DELETE	
			5. EDIT TITLE	
		2. AUTO SCAN	1. SPEED	High, medium, low 3 levels speed optional
			2. LEFT LIMIT	
			3. RIGHT LIMIT	
			4. RUNNING	
		3. TOUR	1. SERIAL NO.	Maximum 4 tours
			2. SETUP	
			3. PREVIEW	
			4. DELETE	
		4. PATTERN SCAN	1. SERIAL NO.	Maximum 4 Pattern scans
			2. RECORD	
			3. PREVIEW	
			4. DELETE	
	4. ALARM SETUP	To configure the preset positions to be invoked for each coming-in alarm channels.		

7.3 Configure the Information of the System

7.3.1 Compile the title of the Speed Dome

When multi Speed Domes are used in the system, in order to more easily identify the Speed Domes, Speed dome title configuration function can be used. The configuring method as below:

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
→1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick to move the cursor to **[1 SYSTEM INFO],** then press **[FOCUS+]** to enter the lower menu:

SYSTEM INFO	
→1 EDIT SPEEDDOME TITLE	
2 TITLE DISPLAY SETUP	
3 PAN/TILT SETUP	
4 CLEAR THE SETUP	
IRIS+: RETURN	IRIS-: EXIT

SYSTEM INFO	
5 LANGUAGE	ENGLISH
IRIS+: RETURN	IRIS-: EXIT

3. Operate the joystick and move the cursor to **[1 EDIT SPEEDDOME TITLE**], press **[FOCUS+]** to enter "Speed Dome Title Compiling" state,

now the cursor is at **[TITLE:]** position.

EDIT SPEEDDOME TITLE	
→TITLE:	
IRIS+: SAVE	IRIS-: EXIT

4. Press **[FOCUS+]** key to enter Input Modes optional state, move the joystick to “ABC”, then press **[FOCUS+]** key repeatedly to choose required Input Mode.

5. After choosing the required Input Mode, move the joystick downwards to character options zone, move the joystick left or right to the required character, press **[FOCUS+]** to confirm.

6. If you want to delete the configuration of the Speed Dome Title, move the cursor to **[TITLE:],** press **[FOCUS-]**, the Title Configuration content can be deleted.

EDIT SPEEDDOME TITLE	
→ **TITLE:**	
ABC Input:	
ABCDEFGHI	
IRIS+: SAVE	IRIS-: EXIT

Attention:

1) There are 4 Input Modes: ABC, abc, DIGIT and SIGN. When the

cursor is moved to “ABC input”, press [FOCUS+] to confirm the Input Mode, then corresponding character is shown. Move the joystick downwards to the characters, move the joystick to left or right to the required character, then press [FOCUS+] to confirm the required character. If the required character is not in the current line, you may move the joystick to left to enter the next line.

2)Up to 20 letters or characters are acceptable for the Title.

7. After the configuration finished, press **[IRIS+]** key to save and return to the upper grade menu.

8. Press **[IRIS-]** key to exit the menu.

The detailed operation method for compiling speed dome title is to be introduced below:

Take compiling title “**1Aa!** ” as an example:

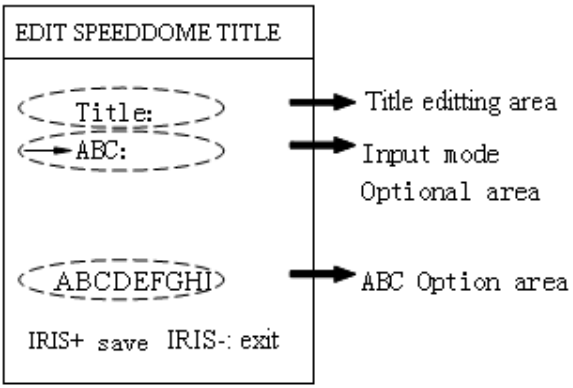
According to the content of this title, the 4 types of Input Modes are as following in turn: DIGIT Input Mode, Capital letters Input Mode, Small letters Input Mode and Sign Input Mode. That is the turn to compile the title.

1. Firstly display the menu as Figure 1 (in this menu, the “ ” is the Ex-work default configuration). Press [FOCUS-] key to delete the default configuration. Now there is not any character behind the “Title”, now you can compile the title.

EDIT SPEEDDOME TITLE	
→ **TITLE:**	
ABC Input:	
ABCDEFGHI	
IRIS+: SAVE	IRIS-: EXIT

2. Choose DIGIT input mode:

A: Move the joystick downwards and move the cursor to “DIGIT”, press [FOCUS+] to choose Input Mode;



B: After choosing “DIGIT”, use the joystick to move the cursor downwards to Digit Optional Zone, then move the cursor to “1” and press [FOCUS+] to confirm. Now “1” is displayed in the Title Compiling Zone.

EDIT SPEEDDOME TITLE
Title: 1
DIGIT:
0→123456789
IRIS+: SAVE IRIS-: EXIT

3. Letter and sign Input Mode:

A: After the digit is input well, move the cursor upwards to Input Mode Optional Area, press [FOCUS+] key to Choose Capital Letter, Small Letter and Sign Input Modes in turn.(The operation process is the same

as Digit input.) Add "**Aa!"** to Title Compiling Area, now "**1Aa!"** is shown in the Title Compiling Area, which means the title is compiled successfully.

B: Press [IRIS+] key to save and return to the upper grade menu.

Attention: So long as the "SPEED DOME TITLE" function in the "TITLE DISPLAY SETUP" is configured as "ON", users can see the title information more conveniently and more promptly from the screen. The operating process also applies to the "Title Compiling" in "Preset position configuration" function. No more detailed description for it in the following chapters. To facilitate your more smooth operating, please read carefully here.

7.3.2 CONFIGURATION FOR TITLE DISPLAY

1. Press **95+PREVIEW** to enter the main menu.

MAIN MENU
→1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[SYSTEM INFO],** press **[FOCUS+]** to enter next grade menu as:

SYSTEM INFO	
1 EDIT SPEEDDOME TITLE	
→2 TITLE DISPLAY SETUP	
3 PAN/TILT SETUP	
4 CLEAR THE SETUP	
IRIS+: RETURN	IRIS-: EXIT

3. Operate the joystick upwards or downwards to move the cursor to **[TITLE DISPLAY SETUP]**, press **[FOCUS+]** to enter TITLE DISPLAY SETUP state, now the cursor is at **"SPEEDDOME TITLE ON".**

TITLE DISPLAY SETUP	
→1 SPEEDDOME TITLE	ON
2 PRESET TITLE	ON
3 DIRECTION TITLE	ON
IRIS+: RETURN	IRIS-: EXIT

4. There are 3 configuration options under the "TITLE DISPLAY SETUP": **SPEEDDOME TITLE, PRESET TITLE, DIRECTION TITLE**.

5. Take the operation of displaying Speed Dome Title as an example. Move the cursor to SPEEDDOME TITLE and press [FOCUS+] key. There is an ON/OFF switch alternatively. When it is shown as **[ON]**, it means SPEEDDOME TITLE DISPLAY function is open. Well, [OFF] means closed.

6. When the configuration finished, press [IRIS+] key to save and return to the upper grade menu.

7. Press [IRIS-] to exit the menu without saving.

Following the moving of the Speed Dome, the information on the screen changes accordingly. From the screen, users can see some current information of the Speed Dome including: **Horizontal and Vertical Angle, the Speed Dome's Title, the Preset Position's Title**.

7.3.3 Configuration of Pan/Tilt parameter

Through the configuration of the Pan/Tilt parameter, the movement of the Speed Dome can be controlled accordingly, which is very important for the control of the image.

1. press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
→1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[SYSTEM INFO]**, press **[FOCUS+]** to enter next grade menu.

SYSTEM INFO
1 EDIT SPEEDDOME TITLE
2 TITLE DISPLAY SETUP
→3 PAN/TILT SETUP
4 CLEAR THE SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick upwards or downwards to move the cursor to **[PAN/TILT SETUP]**, press **[FOCUS+]**to enter PAN/TILT SETUP interface, now the cursor is at “AUTO FLIP ON”.

PAN/TILT SETUP	
→1 AUTO FLIP	ON
2 PROPORTION P/T	ON
3 IDLE TIME	000
4 IDLEACTIVATE	OFF
IRIS+: RETURN	IRIS-: EXIT

4. There are 4 configuration options under **[PAN/TILT SETUP]**: AUTO FLIP, PROPORTION P/T, IDLE TIME, IDLEACTIVATE functions.

5. AUTO FLIP

Operate the joystick to move the cursor to [AUTO FLIP] option, press [FOCUS+] key to enter AUTO FLIP Configuration function, there is ON/OFF switchable. If [ON] is chosen, it means [AUTO FLIP] function is opened. Well, [OFF] means closed. Press [IRIS+] to save and return to the upper grade menu.

Small tip

If AUTO FLIP function is open, when user move the speed dome to the bottom(vertical), if the user still presses on the joystick without release, the lens will automatically pan 180° quickly, so th at the situation at the back can be observed directly. Thus in vertical direction, the whole range of 180° can be monitored.

6. PROPORTION P/T

Operate the joystick to move the cursor to **[PROPORTION P/T]** option. Press [FOCUS+] to enter the configuration of **PROPORTION P/T**. The configuration switches between **ON** and **OFF,** When **ON** is chosen, it means that Speed Matching Function is opened. Well, **OFF** means

closed. Press [IRIS+] to save and return to the upper grade menu.

Small tip

When manually adjusting, if the focus length is far, due to the high sensitivity of the speed dome, the image will move very quickly even if the joystick is slightly touched, which may cause the lost of image; when the Focus Length is near, the image may trembles. Well, due to some special configuration inside the speed dome, the unit can automatically adjust the pan and tilt speed, so that the manual operating object-tracing could be more convenient and much easier.

7. IDLE TIME

Operate the joystick to move the cursor to **[IDLE TIME]** option, press [FOCUS+] key to increase the time, press [FOCUS-] to decrease time.

This configuration allow the speed dome has a period of idle time (1-240Minutes), after which it will carry out IDLE Time Function which is configured by the user in advance. Default configuration is 0, which means it will not carry out any action.

8. **IDLE TIME FUNCTION Activated**

Operate the joystick to move the cursor to **[IDLEACTIVATE]** option, repeatedly press [FOCUS+] key to choose required option (**OFF, PRESET64, AUTOSCAN, TOUR 1**).

[IDLEACTIVATE] means the action which is to be carried out after it is activated. If the **[IDLE TIME]** is configured as 0, this configuration is invalid.

9. When the configuration finished, press [IRIS+] key to save and return to the upper grade menu.

10. press [IRIS-] to exit the configuring without saving

7.3.4 CLEAR THE CONFIGURATION

1. Press **95+PREVIEW** key to enter the main menu.

MAIN MENU
→1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[SYSTEM INFO]**, press **[FOCUS+]** key to enter the lower grade menu.

SYSTEM INFO	
1 EDIT SPEEDDOME TITLE	
2 TITLE DISPLAY SETUP	
3 PAN/TILT SETUP	
→4 CLEAR THE SETUP	
IRIS+: RETURN	IRIS-: EXIT

3. Operate the joystick upwards or downwards to move the cursor to **[CLEAR THE SETUP**], press **[FOCUS+]** key to enter the lower grade menu under the **CLEAR THE SETUP** interface.

CLEAR THE SETUP	
→1 CLR ALL PRE-POSITION	
2 CLR ALL TOUR	
IRIS+: RETURN	IRIS-: EXIT

4. Operate the joystick upwards or downwards to move the cursor to **[CLR ALL PRE-POSITION]**, press **[FOCUS+]** key, now the sign "□" appears at the cursor position, which means all the preset positions are cleared.

5. Operate the joystick upwards or downwards to move the cursor to **[CLR ALL TOUR]**, press **[FOCUS+]** key, now the sign "□" appears at the cursor position, which means all the tours are cleared.

6. Press [IRIS+] to return to the upper grade menu.

7. Press [IRIS-] to exit menu without saving.

Attention: For each order in the Clearing Control Menu, once carried out, it could not restore. If you need them, you could only reset them. So please be cautious to use this function.

7.3.5 Configuration of Language

For this version, the language is English which is certain and can not change.

1. Press **95+PREVIEW** button, enter Main Menu.

MAIN MENU
1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
→4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[SYSTEM INFO]**, press **[FOCUS+]** key to enter the lower grade menu.

SYSTEM INFO	
→1 EDIT SPEEDDOME TITLE	
2 TITLE DISPLAY SETUP	
3 PAN/TILT SETUP	
4 CLEAR THE SETUP	
IRIS+: RETURN	IRIS-: EXIT

Operate the joystick upwards or downwards to show the second page which shows as:

SYSTEM INFO	
5 LANGUAGE	ENGLISH
IRIS+: RETURN	IRIS-: EXIT

3. Press **[IRIS-]** button to exit menu.

7.4. Configure the Parameter of the Camera Module

7.4.1 Digital Zooming Restriction

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP]**, press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
→1 DIGITAL ZOOM ON
2 BLC MODE ON
3 B&W/COLOR MODE
4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick upwards or downwards to move the cursor to **[DIGITAL ZOOM]** option, press **[FOCUS+]** to switch. Choosing **[ON]** means to open Digital Zooming control, that is to say, when the optical zoom reaches the maximum, if you continue to press [zoom+], the camera enters Digital Zoom; If you choose **[OFF]**, Digital Zooming Control is closed.

4. Press [IRIS+] to save and return.

5. Press [IRIS-] to exit the menu without saving

Small tip

If the Digital Zooming Configuration is open, the maximum zooming

times of the camera lens is the optical zooming times multiplying the digital zooming times. If the Digital Zooming Configuration is closed, the maximum zooming times of the camera lens is just the optical zooming times.

7.4.2 Back Light Compensation Mode

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
1 DIGITAL ZOOM ON
→2 BLC MODE ON
3 B&W/COLOR MODE
4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick to move the cursor to **[BLC MODE]** option, press **[FOCUS+]** to switch. Choosing **[ON]** means to open the BLC MODE. Choosing **[OFF]** means to close.

4. Press [IRIS+] to save and return

Small Tip

Strong backlight makes the back-lighted object have shadow, the Backlight Compensation Function enables the camera to automatically adjust the Iris to match the changing of the light, automatically adjust the brightness of the Main Object to make the image clearly displayed.

Attention: This function is related to the type and parameter of the inside camera module. When the Backlight Compensation function is open, it may have Automatically Adjusting(if open) or Manually Adjusting (0-255) 2 kinds of functions, which is subjected to the different camera.

7.4.3 B&W/COLOR MODE

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP	
1 DIGITAL ZOOM ON	
2 BLC MODE ON	
→3 B&W/COLOR MODE	
4 ADVANCED FUNC SETUP	
IRIS+: RETURN	IRIS-: EXIT

3. Operate the joystick to move the cursor to **[B&W/COLOR MODE]** option, press **[FOCUS+]** to enter. There are 3 options:

□**[Auto]** Auto Color/B&W converting mode, the camera will automatically convert according to the illumination;

□**[Color]** Color Image mode;

□**[B&W]** B&W image mode

Attention: The Color/B&W mode configuring options are different for different cameras:

CNB	Manual
CANON	Auto/B&W
HITACHI	Auto, Color and B&W
SONY	Auto, Color and B&W
LG	Auto/B&W

4. press [IRIS+] to save and return

5. press [IRIS-] to exit menu without saving

□**Small Tips**

Recommend to use Color/B&W Auto Conversion function, Color is adopted for daytime, well, B&W adopted for night, which ensures good image quality and also saves the storing room.

Attention: This function is related to the type and parameter of the inside

camera, if there is no such function with the camera, this function in the menu is invalid.

7.4.4 CONFIGURING OF ADVANCED FUNCTIONS

For HITACHI camera, the configuring of ADVANCED FUNCTIONS is as below:

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
1 DIGITAL ZOOM ON
2 BLC MODE ON
3 B&W/COLOR MODE
→4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick to move the cursor to **[ADVANCED FUNC SETUP]** option, press **[FOCUS+]** to enter. There are 8 configuration mode respectively in 2 interfaces:

ADVANCED FUNC SETUP	
1 EXP MODE	AUTO
2 EXP LEVEL	N/A
3 EXPCOMP	ON
→4 SLOW SHUTTER	MANU
IRIS+: SAVE	IRIS-: EXIT

ADVANCED FUNC SETUP	
5 WB MODE	AUTO
6 R GAIN	N/A
7 B GAIN	N/A
→8 CAMERA RESET	OFF
IRIS+: RETURN	IRIS-: EXIT

4. Enter the first Configuration Group Interface. While entering the **[ADVANCED FUNC SETUP]** menu, the cursor is at the first option **[EXP MODE Auto]**, press **[FOCUS+]** key to configure. The function options include **Auto, Shutter, BRIGHT, Gain.** When configuring the **[EXP MODE]** functions, **[EXP LEVEL]** and **[WDR]** options also changes according to the configuration of **[EXP MODE]**.

1) When the **[EXP MODE]** is configured as [Auto], the [EXP LEVEL] can not be configured as the default **N/A.** Press **[FOCUS+]** key to configure [WDR] as **ON/OFF** state.

2) When [EXP MODE] is configured as **[Shutter], [BRIGHT], [Gain],** by pressing **[FOCUS+]** key, you can configure the [EXP LEVEL], the default state of [WDR] is N/A

Configuring parameter matching table:

Exposure Mode	Auto	Shutter	Brightness	Gain
Exposure parameter		1/50 1/100 1/150 1/250 1/500 1/1000 1/2000 1/4000 1/10000 1/30000	F1.6 F2.2 F3.2 F4.4 F6.4 F8.8 F12 F17 F24 F34	0dB 6dB 12dB 18dB 24dB 30dB
SLOW SHUTTER	1/1.5 1/3 1/6 1/12 1/25 OFF			

5. Operate the joystick to move the cursor to **[SLOW SHUTTER],** press **[FOCUS+]** to configure, the configuring parameter is as the SLOW SHUTTER option in the above table. (The function of SLOW SHUTTER is as: When the Speed Dome Camera is working at night or in dark environment, due to the lack of light, the image on the screen is also very dark, configure slow shutter to prolong the light-accepting time, so that the image shot in dark could also be clear.

6. Press **[IRIS+]** to save.

7. Press [IRIS-] to exit the menu without saving.

7.4.5 CONFIGURATION OF ADVANCED FUNCTIONS

For HITACHI camera, the configuration of ADVANCED FUNCTIONS is as below:

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM CONFIGUREUP
IRIS-EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
1 DIGITAL ZOOM ON
2 BLC MODE ON
3 B&W/COLOR MODE
→4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick to move the cursor to **[ADVANCED FUNC SETUP]** option, press **[FOCUS+]** to enter. There are 8 configuration mode respectively in 2 interfaces:

ADVANCED FUNC SETUP	
1 EXP MODE	AUTO
2 EXP LEVEL	N/A
3 EXPCOMP	ON
→4 SLOW SHUTTER	MANU
IRIS+: SAVE	IRIS-: EXIT

ADVANCED FUNC SETUP	
5 WB MODE	AUTO
6 R GAIN	N/A
7 B GAIN	N/A
→8 CAMERA RESET	OFF
IRIS+: RETURN	IRIS-: EXIT

4. Enter the Second Configuration Group Interface. When enter the **[ADVANCED FUNC SETUP]** menu, operate the joystick upwards or downwards to enter the next page menu, the cursor is at the first option **[WB MODE Auto]**, press **[FOCUS+]** to begin to configure, the function options includes **MANU** and **Auto.** While configuring the **[WB MODE]** functions, **[R GAIN]** and **[B GAIN]** options will also change according to the configuration of the **[WB MODE].**

1) If the White Balance is configured as **[Auto]**, the default option for **[R GAIN]** and **[B GAIN]** is **N/A**

2) If the White Balance is configured as **[MANU]**, the parameter for **[R GAIN]** and **[B GAIN]** can be adjusted.

The larger the number is, the stronger the color is.

The parameter configuration matching table is as:

White Balance	Red Gain	Blue Gain
Auto	N/A	N/A
Manual	0~255	0~255

5. Move the cursor to the CAMERA RESET configuration option, press **[FOCUS+]** to begin to configure, when choosing **[ON]**, the camera is initialized, press [IRIS+] to save and return, then it automatically return to

[OFF] state.

6. Press **[IRIS+]** to save

7. Press **[IRIS-]** to exit the menu without saving

7.4. 6 CONFIGURATION OF ADVANCED FUNCTIONS

For Sony camera, the configuration of ADVANCED FUNCTIONS is as below:

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
1 DIGITAL ZOOM ON
2 BLC MODE ON
3 B&W/COLOR MODE
→4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick to move the cursor to **[ADVANCED FUNC SETUP]** option, press **[FOCUS+]** to enter. There are 8 configuration

mode respectively in 2 interfaces:

The first group interface as below:

ADVANCED FUNC SETUP	
1 EXP MODE	Auto
2 EXP LEVEL	N/A
3 EXPCOMP	ON
→4 SLOW SHUTTER	MANU
IRIS+: SAVE	IRIS-: EXIT

ADVANCED FUNC SETUP	
5 WB MODE	AUTO
6 R GAIN	N/A
7 B GAIN	N/A
→8 CAMERA RESET	OFF
IRIS+: RETURN	IRIS-: EXIT

4. Enter the first Configuration Group Interface. While entering the **[ADVANCED FUNC SETUP]** menu, the cursor is at the first option **[EXP MODE Auto]**, press **[FOCUS+]** key to configure. The function options include **Auto, Shutter, BRIGHT, Iris.** When configuring the **[EXP MODE]** functions, the **[EXP LEVEL]** and **[SLOW SHUTTER]** option also changes according to the configuration of **[EXP MODE]**.

1) When the [EXP MODE] is configured as [Auto], the [EXP LEVEL] can not be configured as the default **N/A.** Press **[FOCUS+]** key to configure [Exposure] as **ON/OFF** state.

2) When [EXP MODE] is configured as **[Shutter], [BRIGHT], [Iris],** by pressing **[FOCUS+]** key, you can configure the Exposure Parameter and the Exposure Compensation.

Parameter Configuration matching table:

Exposure Mode	Auto	Shutter	Brightness	Iris
Exposure Parameter		1/1	F2.0/0	F1.4
		1/2	F1.6/0	F1.6
		1/3	F1.4/0	F2.0
		1/12		F2.4
		1/25	The “0” in F1.4/0 can be changed in the range as:	F2.8
		1/50	F1.4/0	F3.4
		1/75	2	F4.0
		1/100	4	F4.8
		1/120	6	F5.6
		1/150	8	F6.8
		1/215	10	F8.0
		1/300	12	F9.6
		1/425	14	F11
		1/600	16	F14
		1/1000	18	F16
		1/1250	20	F19
		1/1750	22	F22
		1/2500	24	OFF
		1/3500	26	
		1/6000	28	
		1/10000		

5. Operate the joystick to move the cursor to **[SLOW SHUTTER],** press **[FOCUS+]** to configure, the configuring state is **MANU**/**Auto**. (The function of SLOW SHUTTER is as: When the Speed Dome Camera is working at night or in dark environment, due to the lack of light, the image

on the screen is also very dark, configure slow shutter to prolong the light-accepting time, so that the image shot in dark could also be clear.

6. Press **[IRIS+]** to save.

7. Press [IRIS-] to exit the menu without saving.

7.4.7 CONFIGURATION OF ADVANCED FUNCTIONS

For Sony camera, the ADVANCED FUNCTIONS SETUP as below:

1. Press **95+PREVIEW** to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick upwards or downwards to move the cursor to **[CAMERA SETUP],** press **[FOCUS+]** to enter the lower grade menu:

CAMERA SETUP
1 DIGITAL ZOOM
2 BLC MODE
3 B&W/COLOR MODE
→4 ADVANCED FUNC SETUP
IRIS+: RETURN IRIS-: EXIT

3. Operate the joystick to move the cursor to **[ADVANCED FUNC SETUP]** option, press **[FOCUS+]** to enter. There are 8 configuration

mode respectively in 2 interfaces:

ADVANCED FUNC SETUP	
1 EXP MODE	Auto
2 EXP LEVEL	N/A
3 EXPCOMP	ON
→4 SLOW SHUTTER	MANU
IRIS+: SAVE	IRIS-: EXIT

ADVANCED FUNC SETUP	
5 WB MODE	AUTO
6 R GAIN	N/A
7 B GAIN	N/A
→8 CAMERA RESET	OFF
IRIS+: SAVE	IRIS-: EXIT

4. Enter the Second Configuration Group Interface. When entered the **[ADVANCED FUNC SETUP]** menu, operate the joystick upwards or downwards to enter the next page menu, the cursor is at the first option **[WB MODE Auto]**, press **[FOCUS+]** to begin to configure, the function options includes **Auto, OUT DOOR, IN DOOR, PUSHLOCK, ATW, MANUAL**. While configuring the **[WB MODE]** functions, **[R GAIN]** and **[B GAIN]** options will also change according to the configuration of the **[WB MODE].**

1) If the White Balance is configured as **[Auto, OUT DOOR, IN DOOR, PUSHLOCK, ATW]**, the default option for **[R GAIN]** and **[B GAIN]** is **N/A**

2) If the White Balance is configured as **[MANUAL]**, the parameter for **[R GAIN]** and **[B GAIN]** can be adjusted. The larger the number is, the thicker the color is.

The parameter configuration matching table is as:

White Balance	Red Color gain	Blue Color gain
AUTO, OUT DOOR, IN DOOR,PUSHLOCK, ATW	N/A	N/A
MANUAL	0-255	0-255

5. Move the cursor to the CAMERA RESET configuration option, press **[FOCUS+]** to begin to configure, when **[ON]** is chosen, the camera is initialized, press [IRIS+] to save and return, then it automatically return to **[OFF]** state.

6. Press **[IRIS+]** to save

7. Press [IRIS-] to exit the menu without saving

7.5. Configuration of Auto Running

7.5.1 Configuration of Preset Position

1. Press **95+PREVIEW** to enter the Main Menu

MAIN MENU
1 SYSTEM INFO
2 CAMERA SETUP
→3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick to move the cursor to **[AUTO-RUN]** option, press **[FOCUS+]** to enter the lower grade menu under the **[AUTO-RUN**]

AUTO-RUN	
→1 RESET POSITION	
2 AUTO SCAN	
3 TOUR	
4 PATTERN SCAN	
IRIS+: SAVE	IRIS-: EXIT

3. Move the cursor to the **[PRESET POSITION]** option, press **[FOCUS+]** to enter the lower grade menu.

PRESET POSITION	
→1 SERIAL NO.	001
2 SETUP	
3 PREVIEW	
4 DELETE	
IRIS+: SAVE	IRIS-: EXIT

4. Configure Preset Position Number: Operate the joystick to move the cursor to **[SERIAL NO.],** press **[FOCUS+]** to enter Serial Number configuration Press **[FOCUS+]** to increase the number, press **[FOCUS-]** to decrease the number. The optional range is 001—128. Choosing number 001 as the current preset position, we explain the following operations all basing on this current preset position.

PRESET POSITION	
→5 COMPILE TITLE	
IRIS+: RETURN	IRIS-: EXIT

5. Configure Preset Position: Move the cursor to **[Setup]** option, press [FOCUS+] key, now the sign "□" appears in front of the **[Setup]** option, which means Preset Position can be configured. Choose the position through operating the joystick, adjust the zooming times, choose the

object image, press [FOCUS+] to save the configuration.

□ Small tips

Preset position function is to save the Horizontal angle, the tilt angle as well as the Focus Length etc parameter in the Speed Dome, when necessary, promptly invoke these parameters, the Pan/Tilt and the Lens can automatically adjust to this position.

6. Invoke preset position: move the cursor to **[PREVIEW]**, Press [FOCUS+] button, when a "□" sign appears in front of **[PREVIEW]**, it means the present preset position is already invoked. Screen shows the present preset position.

7. Delete present preset position: move the cursor to **[DELETE]**, Press [FOCUS+] button, when a "□" sign appears in front of **[DELETE]**, it means the present preset position is already deleted.

8. Compile present preset position's title: move the cursor to **[COMPILE TITLE]**, press **[FOCUS+]** button for 2 times to enter preset position's title compiling configuration.

Attention: COMPILE TITLE is on the lower menu of the **PRESET POSITION**, you can choose it by operating the joystick upwards and downwards, for the title compiling operation, please refer to **speed dome title compiling** operation.

9. If there is need to delete the configuration of preset position's title, move the cursor to **[DELETE]**, press **[FOCUS+]** button, you can delete the content of the configuration.

10. Press [IRIS+] button to save and return.

11. Press **[IRIS-]** button to exit menu.

Attention: 1. When carrying out **Configuring, Invoke, Delete preset position** operations, preset position number must be chosen firstly. 2. The present preset position refers to the preset position with the corresponding number in the present SERIAL NO. option.

7.5.2 Left/right scan

1. Press **95+PREVIEW** button to enter the Main Menu

MAIN MENU
1 SYSTEM INFO
→2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Move the cursor to **[AUTO-RUN]** by operate the joystick upwards and downwards**,** press **[FOCUS+]** button to enter the lower menu of **[AUTO-RUN]**. Move the cursor to **[AUTO SCAN]**, press **[FOCUS+]** button and show the menu as:

AUTO-RUN	AUTO SCAN
1PRESET POSITION	→1 SPEED MEDIUM
→2 AUTO SCAN	2 LEFT LIMIT
3 TOUR	3 RIGHT LIMIT
	4 RUNNING
IRIS+: RETURN IRIS-: EXIT	IRIS+: SAVE IRIS-: EXIT

3. **Configuration of Scanning speed**: move the cursor to **[SPEED]** option by operating the joystick, press **[FOCUS+]** button to choose speed, there are three kinds of optional speed (**Low, Medium, High**).

4. **Configuring of left limiting position**: move the cursor to **[LEFT LIMIT]** by operating the joystick, press **[FOCUS+]** button, when a "□"sign appears in front of **[LEFT LIMIT]**, it means the configuring can be carried

out. Operate the joystick to choose the object image, press **[FOCUS+]** button to save.

5. **Configuring of right limiting position**: move the cursor to **[RIGHT LIMIT]** by operating the joystick, press **[FOCUS+]** button, when a "□"sign appears in front of **[RIGHT LIMIT]**, it means the configuring can be carried out. Operate the joystick to choose the object image, press **[FOCUS+]** button to save.

6. Start scanning: operate the joystick to move the cursor to **[Running]**, press [FOCUS+] button, you will exit the menu firstly, then speed dome start to scan.

7. Press [IRIS+] button to save and return.

8. Press **[IRIS-]** button to exit the menu.

Attention:

1 Scan's left/right position can not be at the same position. If they are at the same position, that means scanning for 360°.

2 When scanning, the speed, magnifying times, vertical angle will not change, if the magnifying times and the vertical angle of the two positions are not identical correspondingly, the magnifying times and the vertical angle of the left position will be adopted.

7.5.3 Configuration of Tour

1. Press **95+PREVIEW** button to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
2 CAMERA SETUP
→3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Move the cursor to **[AUTO-RUN]** by operating the joystick upwards and downwards**,** press **[FOCUS+]** button to enter the lower menu of **[AUTO-RUN]**. Move the cursor to **[TOUR]**, press **[FOCUS+]** button and show the menu as:

AUTO-RUN
1 PRESET POSITION
2 AUTO SCAN
→3 TOUR
IRIS+: SAVE IRIS-: EXIT

TOUR
→1 SERIAL NO. 001
2 SETUP
3 PREVIEW
4 DELETE
IRIS+: SAVE IRIS-: EXIT

3. Configuration of Tour Number: Move the cursor to **[SERIAL NO.]** by operating the joystick upwards, press **[FOCUS+]** button to enter the configuration of serial number. Press **[FOCUS+]** button to increase, press **[FOCUS-]** button to decrease. The optional range is 001—004, choose 001 as the present tour serial number, all below operation is based on this tour number.

TOUR NO. 001			
PRESET	TIME	PRESET	TIME
01.→000	000;	02 . 000	000
03. 000	000;	04 . 000	000
05. 000	000;	06 . 000	000
IRIS+: SAVE		IRIS-: EXIT	

4. Configuring the staying time at Preset Position: move the cursor to **[SETUP]**, press [FOCUS+] button to enter the tour preset position and staying time configuring. 16 preset positions can be included for each tour group, the range of the preset positions is 001—128, the range of dwelling time is 000—255 seconds.

5. Tour route configuration: we take the 1st tour group (1 group has 16 preset positions), the 1st preset position with the dwelling time of 3 seconds as an example:

A: move the cursor to the first group in the tour configuring area **[01. 000 000……16. 000 000]**, among them, 01-16 means the quantity of the preset positions in the tour is 16, which can not be changed;

B: Operate the joystick left or right to move the cursor to the first configuration zone “000” (preset position). Press [FOCUS+] button to increase, press [FOCUS-] button to decrease, the range is 001-128, for example, we can configure the preset position as “001”;

C: Then operate the joystick left or right to move the cursor to the second configuration zone “000” (dwelling time), press [FOCUS+] button to increase, press [FOCUS-] button to decrease, the range is 000-255sec, configure the time as “003”, now one preset position has been added to the tour;

D: After the adding of one preset position, operate the joystick to right

and move the cursor to the next configuration point for configuring, use the same method to add all the preset positions of the tour as well as the corresponding dwelling time. After configuring, press [IRIS+] button to save and return. Now, the first tour route has been configured successfully, using the same method, you can configure the other tour routes.

6. Start running the tour: move the cursor to **[PREVIEW]** by operating the joystick, press [FOCUS+] button, you will exit the menu firstly, then the speed dome starts to run the tour.

7. Delete the configuration of the tour: move the cursor to **[DELETE]** by operating the joystick, press **[FOCUS+]** button, when a "□"sign appears in front of **[DELETE]**, it means the present tour has been deleted.

8. Press **[IRIS+]** button to save and return

9. Press **[IRIS-]** button to exit menu

7.5.4 Configuring of Pattern scan

Description of the function: Pattern scan has record space 99, time can be different with different routes, the total time is about 4 minutes. The recording route can be configured freely (including the movement of the Pan/tilt, and the zoom ratio of the camera lens). Totally 4 Pattern Scan routes can be configured.

1. Press **95+PREVIEW** button to enter the Main Menu.

MAIN MENU
1 SYSTEM INFO
2 CAMERA SETUP
→3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Move the cursor to **[AUTO-RUN]** by operate the joystick upwards and downwards, press **[FOCUS+]** button to enter the lower menu of **[AUTO-RUN]**. Move the cursor to **[PATTERN SCAN]**, press **[FOCUS+]** button and show the menu as:

AUTO-RUN
1 PRESET POSITION
2 AUTO SCAN
3 TOUR
→4 PATTERN SCAN
IRIS+: SAVE IRIS-: EXIT

3. Configure the serial number of the Pattern scan: move the cursor to **[SERIAL NO.]** by operating the joystick, press **[FOCUS+]** button to enter the serial number configuration interface. Press **[FOCUS+]** button to increase, press **[FOCUS-]** button to decrease. The optional range is 001—004, choose 001 as the present Pattern scan number, all the below operations take this Pattern scan number as an example.

4. **Recording**: After the Serial Number is chosen well, move the cursor to **[RECORD]**, press **[FOCUS+]** button to enter the "**MOVE TO START POINT**" interface. Now, you can operate the keyboard to adjust the image to the position where the record is to begin.

5. After choosing the starting position, press **1+PREVIEW** button to begin to record, operate the speed dome (including controlling the pan/tilt as well as the camera lens) to move according to your desired route so that the unit can record. The maximum recording room is 99/100 (about 4 minutes). After the recording is finished, press **1+PREVIEW** button to exit the recording operation and return to **Pattern Scan Setup** interface. Now the Cursor is pointing to **[RECORD]**.

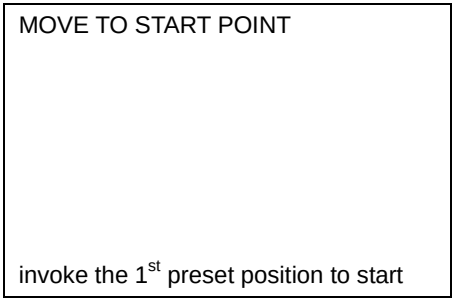
6. **Run the Pattern Scan**: move the cursor down to **[PREVIEW]**, press **[FOCUS+]** button to run the Pattern scan.

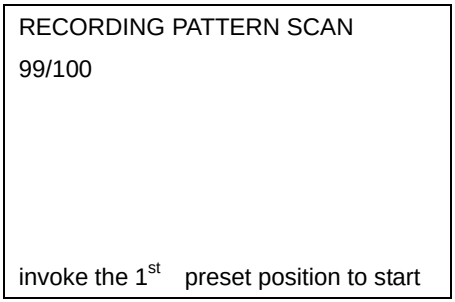
7. **Delete the configuration**: enter the pattern scan configuration menu, move the cursor down to **[DELETE]**, press **[FOCUS+]** button and a "□"sign will appear, which means the present recorded content has been deleted.

8. Press [IRIS+] button to save and return.

9. Press **[IRIS-]** button to exit the menu.

Attention: the operating method for the other three Pattern scan Routes is the same as the above





7.6 Configuration of Alarm function

1. Press **95+PREVIEW** button to enter the Main Menu.

MAIN MENU
→1 SYSTEM INFO
2 CAMERA SETUP
3 AUTO-RUN
4 ALARM SETUP
IRIS-: EXIT

2. Operate the joystick to move the cursor to [→**4 ALARM SETUP**] option, press **[FOCUS+]** to enter the lower grade menu.

ALARM SETUP	
→ALARM1	CALL PRESET:N/A
ALARM2	CALL PRESET:N/A
ALARM3	CALL PRESET:N/A
ALARM4	CALL PRESET: N/A
IRIS+: RETURN	IRIS-: EXIT

3. While enter this grade of menu, the cursor is pointing to the first channel alarm configuration, the ex-work default state of it is **N/A**(Off). Now we take the configuring of the 1st channel alarm **[ALARM1 CALL PRESET**: **N/A]** as an example. The preset positions must be configured well within the range of 001-064 in advance, so that they can be used for the configuring of alarm.

A. Press [FOCUS+] button to open the alarm configuring, the "N/A" changes to "001", it means the first channel alarm has been on, alarm point is the 1st preset position.

ALARM SETUP	
→ALARM1	CALL PRESET:001
ALARM2	CALL PRESET:N/A
ALARM3	CALL PRESET:N/A
ALARM4	CALL PRESET: N/A
IRIS+: RETURN	IRIS-: EXIT

B. If there is a need to configure any preset position among 001-064, just press [FOCUS+] to increase or [FOCUS-] to decrease.

C. The configuring method for other channels are the same as the 1st one.

4. The unit has 4 channels alarm input, 1 channel alarm output. Alarm interaction is realized. When external alarm signal is transmitted to the speed dome, the speed dome camera will turn to the alarm spot to shoot, and directly show on the screen what happens at the alarm spot. At the same time, it will output alarm signal at the alarm output port.

5. Press [IRIS+] button to save and return.

6. Press **[IRIS-]** button to exit the menu.

Attention:

A. Alarm input must be ON/OFF input signal, any other types of input signal(such as power voltage etc) is possible to damage the unit. When there are alarm signals from multi channels, the unit will respond to them one by one, the interval is 3 seconds.

B. Once there is alarm signal coming in, the unit will not respond to “Scan”, “Tour” etc functions. Manual operation is needed to restore “Scan”, “Tour” etc functions.

C. No matter the alarm function is opened or closed, alarm output always responds. For example, if the alarm function of the unit is not open, when

the unit distinguishes alarm signal, the unit will not be adjusted to corresponding preset position, but the alarm output still responds.

VII. Simple Trouble Shooting Table

Problems	Possible causes	remedies
No action, no picture, no indicator on when power is switched on.	Wrong connection of power cables	Correct
	Power supply adaptor damaged	Replace
	Fuse damaged	Replace
	Bad power cable connection	Correct
Normal self-check and image but out of control	Address or Baud rate configuration wrong	Configure again
	Protocol configuration wrong	Configure again
	RS485 bus bad connection	Check RS485 bus connection
Abnormal self-check image with motor noise	Mechanical failure	Repair
	Camera inclined	Reinstall
	Power supply not enough	Replace, better to place the adaptor nearby the speed dome
Unstable image	Bad connection of video cable	Correct
	Power supply not enough	Replace
Fuzzy image	At Manual focus state	Operate the speed dome camera or invoke any preset positions
	Vitreous cover dirty	Clean the vitreous cover
Some speed dome camera out of control or control delayed	Power supply not enough	Replace, better to place the adaptor nearby the speed dome
	Whether matching resistor is in the speed dome camera at the farthest end	Install matching resistor in the speed dome camera

	The distance is too far, the attenuation of 485 signal is too much	Thicken the controlling cable
	The driving power of the 485 converter is not enough	Replace with converter with separate power supply

VIII. Correspondence of Address and Coding Switches

(SW1: DIP1-DIP8)

NO	87654321	NO	87654321	NO	87654321
1	00000001	32	00100000	63	00111111
2	00000010	33	00100001	64	01000000
3	00000011	34	00100010	65	01000001
4	00000100	35	00100011	66	01000010
5	00000101	36	00100100	67	01000011
6	00000110	37	00100101	68	01000100
7	00000111	38	00100110	69	01000101
8	00001000	39	00100111	70	01000110
9	00001001	40	00101000	71	01000111
10	00001010	41	00101001	72	01001000
11	00001011	42	00101010	73	01001001
12	00001100	43	00101011	74	01001010
13	00001101	44	00101100	75	01001011
14	00001110	45	00101101	76	01001100
15	00001111	46	00101110	77	01001101
16	00010000	47	00101111	78	01001110
17	00010001	48	00110000	79	01001111
18	00010010	49	00110001	80	01010000
19	00010011	50	00110010	81	01010001
20	00010100	51	00110011	82	01010010
21	00010101	52	00110100	83	01010011
22	00010110	53	00110101	84	01010100
23	00010111	54	00110110	85	01010101
24	00011000	55	00110111	86	01010110
25	00011001	56	00111000	87	01010111
26	00011010	57	00111001	88	01011000

NO	87654321	NO	87654321	NO	87654321
27	00011011	58	00111010	89	01011001
28	00011100	59	00111011	90	01011010
29	00011101	60	00111100	91	01011011
30	00011110	61	00111101	92	01011100
31	00011111	62	00111110	93	01011101

NO	87654321	NO	87654321	NO	87654321
94	01011110	125	01111101	156	10011100
95	01011111	126	01111110	157	10011101
96	01100000	127	01111111	158	10011110
97	01100001	128	10000000	159	10011111
98	01100010	129	10000001	160	10100000
99	01100011	130	10000010	161	10100001
100	01100100	131	10000011	162	10100010
101	01100101	132	10000100	163	10100011
102	01100110	133	10000101	164	10100100
103	01100111	134	10000110	165	10100101
104	01101000	135	10000111	166	10100110
105	01101001	136	10001000	167	10100111
106	01101010	137	10001001	168	10101000
107	01101011	138	10001010	169	10101001
108	01101100	139	10001011	170	10101010
109	01101101	140	10001100	171	10101011
110	01101110	141	10001101	172	10101100
111	01101111	142	10001110	173	10101101
112	01110000	143	10001111	174	10101110
113	01110001	144	10010000	175	10101111
114	01110010	145	10010001	176	10110000
115	01110011	146	10010010	177	10110001
116	01110100	147	10010011	178	10110010
117	01110101	148	10010100	179	10110011
118	01110110	149	10010101	180	10110100
119	01110111	150	10010110	181	10110101
120	01111000	151	10010111	182	10110110

NO	87654321	NO	87654321	NO	87654321
121	01111001	152	10011000	183	10110111
122	01111010	153	10011001	184	10111000
123	01111011	154	10011010	185	10111001
124	01111100	155	10011011	186	10111010

NO	87654321	NO	87654321	NO	87654321
187	10111011	210	11010010	233	11101001
188	10111100	211	11010011	234	11101010
189	10111101	212	11010100	235	11101011
190	10111110	213	11010101	236	11101100
191	10111111	214	11010110	237	11101101
192	11000000	215	11010111	238	11101110
193	11000001	216	11011000	239	11101111
194	11000010	217	11011001	240	11110000
195	11000011	218	11011010	241	11110001
196	11000100	219	11011011	242	11110010
197	11000101	220	11011100	243	11110011
198	11000110	221	11011101	244	11110100
199	11000111	222	11011110	245	11110101
200	11001000	223	11011111	246	11110110
201	11001001	224	11100000	247	11110111
202	11001010	225	11100001	248	11111000
203	11001011	226	11100010	249	11111001
204	11001100	227	11100011	250	11111010
205	11001101	228	11100100	251	11111011
206	11001110	229	11100101	252	11111100
207	11001111	230	11100110	253	11111101
208	11010000	231	11100111	254	11111110
209	11010001	232	11101000	255	11111111